

University Animal Care Committee Standard Operating Procedure		
Document No: 7.6	Subject: Anesthesia in Mice	
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Nosecone
 Isoflurane
 Ketamine 100mg/kg (controlled substance - exemption permit required)
 Xylazine (20mg/mL)
 Acepromazine (10mg/mL)
 Medetomidine
 Atipamezole
 Sterile sodium chloride 0.9% or
 Sterile water (diluent)
 Lactated Ringers solution (fluid therapy)
 Sterile needles (various sizes)
 Alcohol swabs
 Gauze
 Eye Lubricant
 10mL red top vacutainers

3. Procedures:

- :
- i. Induction
 1. Place the animal in the induction chamber.
 2. Adjust the oxygen flow to 1 - 1.5 L/min.
 3. Adjust the vaporiser to 3% - 5%.
 4. Once the mouse is in lateral recumbency and cannot right itself, apply eye lubricant using a sterile cotton tip applicator, and transfer the animal to a nosecone for maintenance.
 - ii. Maintenance
 1. Ensure the mouse's snout is firmly seated in the nosecone with a good seal.
 2. Adjust the oxygen flow to 800-1000 ml/min.
 3. Adjust the vaporiser from 1 - 2.5% (this is variable depending on the depth of anesthesia required for the particular procedure or for the strain of the mouse).
 4. Maintain the mouse on a heating device the duration of the procedure.
 - iii. Recovery
 1. Turn off the isoflurane and leave the animal on 100% oxygen (short term).
 2. Administer fluid therapy.
 3. Transfer the animal to a clean cage and place it on a piece of paper towel until it is mobile.
 4. Provide heat during this recovery phase to half of the cage, to ensure that the mouse has the ability to escape the heat as necessary.
 5. Return the animal to the colony room once it has fully recovered from anaesthesia (blinking and righting reflex have returned).
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(100ul) per 10g body weight IP.

- v. Duration of anaesthesia is approximately 30 minutes depending on the strain, sex, and body weight of the animal.
 - vi. After 30 minutes, a half dose (0.05 ml per 10g) may be administered as needed.
 - vii. Atipamezole (5 mg/ml) can be administered to reverse xylazine and facilitate recovery at a dose of 0.1 to 5.0 mg/kg SC or IP.
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Date	New Version
March 14, 2012	Created
December 15, 2016	Review and update
February 28, 2019	Triennial Review
June 20, 2019	Update
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